

CLAIMS

What is claimed is:

1. A method of treating, preventing or managing macular degeneration, which comprises administering to a patient in need of such treatment, prevention or management a therapeutically or prophylactically effective amount of an immunomodulatory compound, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof.
2. The method of claim 1, further comprising administering a therapeutically or prophylactically effective amount of a second active agent.
3. The method of claim 2, wherein the second active agent is a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neurotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound or an antiangiogenesis compound.
4. The method of claim 2, wherein the second active agent is thalidomide, verteporfin, purlytin, an angiostatic steroid, rhuFab, interferon-2 α or pentoxifylline, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof.
5. The method of claim 4, wherein the antiangiogenesis compound is thalidomide.
6. The method of claim 1, wherein the macular degeneration is wet macular degeneration, dry macular degeneration, age-related macular degeneration, age-related maculopathy, choroidal neovascularisation, retinal pigment epithelium detachment, atrophy of retinal pigment epithelium, Best's disease, vitelliform, Stargardt's disease, juvenile macular dystrophy, fundus flavimaculatus, Behr's disease, Sorsby's disease, Doyme's disease, honeycomb dystrophy, or macular damaging condition.
7. The method of claim 1, wherein the immunomodulatory compound is stereomerically pure.

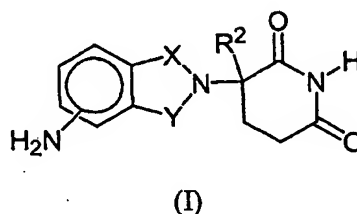
8. A method of treating, preventing or managing macular degeneration, which comprises administering to a patient in need of such treatment, prevention or management a therapeutically or prophylactically effective amount of 4-(amino)-2-(2,6-dioxo(3-piperidyl))-isoindoline-1,3-dione, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof.

9. The method of claim 8, wherein the 4-(amino)-2-(2,6-dioxo(3-piperidyl))-isoindoline-1,3-dione is enantiomerically pure.

10. A method of treating, preventing or managing macular degeneration, which comprises administering to a patient in need of such treatment, prevention or management a therapeutically or prophylactically effective amount of 3-(4-amino-1-oxo-1,3-dihydro-isoindol-2-yl)-piperidine-2,6-dione, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof.

11. The method of claim 10, wherein the 3-(4-amino-1-oxo-1,3-dihydro-isoindol-2-yl)-piperidine-2,6-dione is enantiomerically pure.

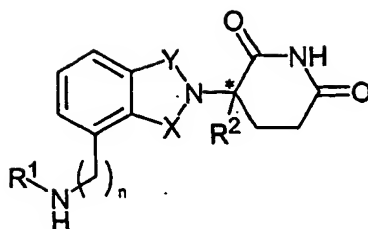
12. The method of claim 1, wherein the immunomodulatory compound is of formula (I):



wherein one of X and Y is C=O, the other of X and Y is C=O or CH₂, and R² is hydrogen or lower alkyl.

13. The method of claim 12, wherein the immunomodulatory compound is enantiomerically pure.

14. The method of claim 1, wherein the immunomodulatory compound is of formula (II):



(II)

wherein

one of X and Y is C=O and the other is CH₂ or C=O;

- 5 R¹ is H, (C₁-C₈) alkyl, (C₃-C₇) cycloalkyl, (C₂-C₈) alkenyl, (C₂-C₈) alkynyl, benzyl, aryl, (C₀-C₄) alkyl-(C₁-C₆) heterocycloalkyl, (C₀-C₄) alkyl-(C₂-C₅) heteroaryl, C(O)R³, C(S)R³, C(O)OR⁴, (C₁-C₈) alkyl-N(R⁶)₂, (C₁-C₈) alkyl-OR⁵, (C₁-C₈) alkyl-C(O)OR⁵, C(O)NHR³, C(S)NHR³, C(O)NR³R^{3'}, C(S)NR³R^{3'} or (C₁-C₈) alkyl-O(CO)R⁵;

R² is H, F, benzyl, (C₁-C₈) alkyl, (C₂-C₈) alkenyl, or (C₂-C₈) alkynyl;

- 10 R³ and R^{3'} are independently (C₁-C₈) alkyl, (C₃-C₇) cycloalkyl, (C₂-C₈) alkenyl, (C₂-C₈) alkynyl, benzyl, aryl, (C₀-C₄) alkyl-(C₁-C₆) heterocycloalkyl, (C₀-C₄) alkyl-(C₂-C₅) heteroaryl, (C₀-C₈) alkyl-N(R⁶)₂, (C₁-C₈) alkyl-OR⁵, (C₁-C₈) alkyl-C(O)OR⁵, (C₁-C₈) alkyl-O(CO)R⁵, or C(O)OR⁵;

- 15 R⁴ is (C₁-C₈) alkyl, (C₂-C₈) alkenyl, (C₂-C₈) alkynyl, (C₁-C₄) alkyl-OR⁵, benzyl, aryl, (C₀-C₄) alkyl-(C₁-C₆) heterocycloalkyl, or (C₀-C₄) alkyl-(C₂-C₅) heteroaryl;

R⁵ is (C₁-C₈) alkyl, (C₂-C₈) alkenyl, (C₂-C₈) alkynyl, benzyl, aryl, or (C₂-C₅) heteroaryl;

- 20 each occurrence of R⁶ is independently H, (C₁-C₈) alkyl, (C₂-C₈) alkenyl, (C₂-C₈) alkynyl, benzyl, aryl, (C₂-C₅) heteroaryl, or (C₀-C₈) alkyl-C(O)O-R⁵ or the R⁶ groups join to form a heterocycloalkyl group;

n is 0 or 1; and

* represents a chiral-carbon center.

15. The method of claim 14, wherein the immunomodulatory compound is enantiomerically pure.

- 25 16. The method of claim 1, wherein the immunomodulatory compound is a cyano or carboxyl derivative of a substituted styrene, 1-oxo-2-(2,6-dioxo-3-fluoropiperidin-3-yl) isoindoline, 1,3-dioxo-2-(2,6-dioxo-3-fluoropiperidine-3-yl) isoindoline, or tetra substituted 2-(2,6-dioxopiperdin-3-yl)-1-oxoisoindoline.

17. The method of claim 16, wherein the immunomodulatory compound is enantiomerically pure.

18. A method of treating, preventing or managing macular degeneration, which comprises administering to a patient in need of such treatment, prevention or management a therapeutically or prophylactically effective amount of an immunomodulatory compound, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof, before, during or after surgical intervention directed at reducing or avoiding a symptom of macular degeneration in the patient.

19. The method of claim 18, wherein the surgical intervention is light therapy, laser therapy, radiation therapy, retinal pigment epithelium transplantation, or foveal translocation.

20. A pharmaceutical composition comprising an immunomodulatory compound, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof, and a second active agent capable of reducing or avoiding a symptom of macular degeneration.

21. The pharmaceutical composition of claim 20, wherein the second active agent is a steroid, a light sensitizer, an integrin, an antioxidant, an interferon, a xanthine derivative, a growth hormone, a neutrotrophic factor, a regulator of neovascularization, an anti-VEGF antibody, a prostaglandin, an antibiotic, a phytoestrogen, an anti-inflammatory compound or an antiangiogenesis compound.

22. The pharmaceutical composition of claim 20, wherein the second active agent is thalidomide, verteporfin, purlytin, an angiostatic steroid, rhuFab, interferon-2 α or pentoxifylline, or a pharmaceutically acceptable salt, solvate, or stereoisomer thereof.